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Southern Forest Pest Reporter

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ENVIRONMENTAL PROTECTION AND IMPROVEMENT Forest Pest Management Southeastern Area STATE AND PRIVATE FORESTRY

FOREST SERVICE
U.S. DEPT OF AGRICULTURE

November, 1971

No. 3

FIELD OFFICES
Asheville, N.C.-Alexandria, La.

1720 PEACHTREE ST. N.W. ATLANTA GA. 30309

SUMMARY OF CONDITIONS



....Southern pine beetle infestations appear to be increasing over the Southeastern Area at this time, especially in South Carolina, Georgia, Texas, Louisiana and Mississippi. High beetle activity is occurring on the Tusquitee Ranger District, Nantahala National Forest; Tellico Ranger District, Cherokee National Forest; Tyger-Enoree and Andrew Pickens Districts on the Sumter National Forest, and in the Great Smoky Mountains National Park.



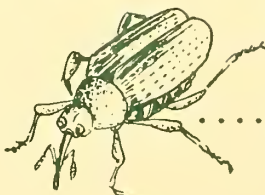
....The gypsy moth is now being trapped in a number of Southeastern Area States, including seventeen counties in Virginia, six counties in North Carolina, one county in South Carolina, in addition to the already known Florida location. Many of the trappings have been made around camping areas indicating that wide dispersion is occurring. However, this does not indicate that the insect is established in these areas.



....The pine sawflies have been especially active during the past several months. The Virginia pine sawfly has caused damage in Kentucky, Tennessee, and Virginia. The Arkansas sawfly has been active in Kentucky and Tennessee while the red headed pine sawfly has caused moderate to heavy defoliation in Kentucky, Mississippi, Texas, and Virginia.

....Fall webworm infestations have been moderate to heavy in Mississippi, North Carolina, South Carolina, and Virginia.

....Cylindrocladium root rot has been especially severe in forest tree nurseries in Alabama and North Carolina on black walnut



SUMMARY (CONT'D)

and yellow poplar. Lophodermium needle cast has caused needle discoloration and defoliation on white pine seedlings in Tennessee and Spanish variety scotch pine in North Carolina.

-Dutch elm disease has been detected in two new counties in South Carolina. These were over 100 miles from the original detection point.
-Oak wilt was discovered for the first time in Richland County, South Carolina. Four counties are now known to have the disease present.

STATUS OF FOREST INSECTS

SOUTHERN PINE BEETLE, *Dendroctonus frontalis* Zimm.

- GEORGIA Southern pine beetle activity is currently being evaluated on the Chattahoochee National Forest. Unconfirmed reports indicate present moderate level of activity in areas which have had no beetles for the past several years.
- LOUISIANA Southern pine beetle populations are still of epidemic proportions on the Fort Polk area of the Kisatchie National Forest.
- Infestations appear to be reaching a critical level on private land in the Louisiana Forestry Commission Districts 2, 3, 5, 6, 7 and 8. Many spots containing 300-400 trees have been observed. A cooperative evaluation is presently being made by the Forest Pest Management Group and the Louisiana Forestry Commission. Beetle populations appear to be epidemic throughout the Kisatchie National Forest. An appraisal survey is being hampered by hardwood coloration.
- MISSISSIPPI Southern pine beetle activity is increasing in Franklin, Amite, and Wilkinson counties in southwest Mississippi. A survey is presently being conducted by the Mississippi Forestry Commission. (Mississippi Forestry Commission)
- SOUTH CAROLINA After three years of negligible southern pine beetle activity in South Carolina, fall surveys have revealed a resurgence of high beetle populations over much of the State. Surveys conducted in September have revealed beetle populations on the Tyger-Enoree Districts (30±28 infested trees over 1000 acres host type) and on the Andrew Pickens District (118±83 infested trees over 1000 acres host type) of the Sumter National Forest. Infestations can be categorized as generally scattered on the Tyger-Enoree and localized, larger spots on the south portion of the Andrew Pickens. Surrounding Ranger Districts are currently being surveyed for additional southern pine beetle activity.
- A survey of all Districts on the Francis Marion National Forest revealed a few spots of southern pine beetle activity. Activity is not currently great, but does represent a potential for buildup next spring.
- An aerial reconnaissance and ground survey conducted by the South Carolina State Commission of Forestry in early September, 1971 also indicates an upswing of the southern pine beetle population in portions of the Piedmont. Aerial surveys covering 100 percent of a 500,000 acre outbreak area are presently underway. The purpose of the survey which

SOUTHERN PINE BEETLE (CONT'D)

SOUTH
CAROLINA
(CONT'D)

includes four northern Piedmont counties is to locate spots for salvage operations to reduce timber losses and to minimize potential mortality caused by the beetle. The largest spot ground checked to date contained 1000 trees. (South Carolina State Commission of Forestry).

NORTH
CAROLINA

The southern pine beetle continues to cause heavy losses on the Tusquitee Ranger District of the Nantahala National Forest. A September survey showed an estimated 597 ± 596 infested trees per 1000 acres host type. Large numbers of green infested trees indicate that the beetle is entering the winter at moderate brood levels with extremely high potential for damage next spring.

The Uwharrie District of the National Forests in North Carolina is currently being surveyed for southern pine beetle activity. District personnel report individual beetle spots containing up to 500 infested trees.

Light to moderate infestations are reported in Stanley, Rowan, Daire, Durham, Person, Onslow, Cabarrus, Randolph and Carteret Counties. Generally, southern pine beetle activity has decreased on State and Private lands in central and eastern North Carolina from levels of one year ago. (North Carolina Department of Natural and Economic Resources)

TENNESSEE

Southern pine beetle activity continues to cause heavy damage in localized areas of the Great Smoky Mountains National Park. Fall surveys revealed that most activity is restricted to the North shore of Fontana Lake and to the Fighting Creek area near Gatlinburg, Tennessee. In the Fighting Creek area, the number of infested trees per 1000 acres of host type exceeded 1000 which is one of the highest levels ever recorded in the southeast.

Fall surveys of the adjoining Tellico Ranger District of the Cherokee National Forest also revealed high levels of beetle activity over 80,000 acres on the southern two-thirds of the District. The infestation level was estimated at 162 ± 150 infested trees per 1000 acres of host type. An active winter suppression project involving cutting and burning and salvage is underway.

TEXAS

Southern pine beetle populations are at moderate levels on the Angelina and Yellowpine Ranger Districts. Populations have been reported to be increasing on the Tenaha and Raven Ranger Districts. An evaluation of populations

SOUTHERN PINE BEETLE (CONT'D)

TEXAS
(CONT'D)

on the National Forests in Texas will be made during October by the Forest Pest Management Group.

The southern pine beetle is taking its toll of trees in Texas Forest Districts 3, 4, 5 and 6. (Forest Pest Activity Report, Texas Forest Service)

VIRGINIA

The severe southern pine beetle epidemic on the Virginia portion of the Delmarva Peninsula (Delaware-Maryland-Virginia) has declined somewhat in intensity from past levels. In a Northeastern Area-Southeastern Area cooperative survey of the Peninsula, intensity of the outbreak in Accomac County, Virginia was estimated at 192 ± 82 infested trees per 1000 acres host type. The trend is from larger to smaller but more numerous spots.

Southern pine beetle activity was also noted in the Virginia coastal plains districts, with spots ranging up to one-half acre in size, and occasionally larger (five two-acre spots and one ten-acre spot were reported). An increasing southern pine beetle population was evident in Campbell County in the Piedmont, where spots ranged up to one-half acre in size. (Virginia Division of Forestry).

BLACK TURPENTINE BEETLE, *Dendroctonus terebrans* Oliv.

ARKANSAS

Increases have been noted in the Camden, Wickes, Pine Bluff, Fordyce, and Arkadelphia areas. Careless logging practices, resulting in mechanical injury to trees, will favor successful attacks by this beetle. (Arkansas Pest Report)

FLORIDA

Outbreaks of black turpentine beetle have occurred in naval stores areas and some selectively harvested areas. Stress caused by drought conditions in conjunction with gum farming and cutting activities are believed contributing to the increased activity. (Florida Division of Forestry)

LOUISIANA

Black turpentine beetle damage is moderate on the Catahoula and Winn Districts of the Kisatchie National Forest. Most activity is confined to areas where heavy bole damage resulted from logging operations.

MISSISSIPPI

Black turpentine beetle activity was reported in the Camp Shelby area of the Black Creek Ranger District. Tank maneuvers were conducted in 25-30 year old longleaf and

BLACK TURPENTINE BEETLE (CONT'D)

- MISSISSIPPI slash pine plantations. Most of the trees damaged were
(CONT'D) attacked by black turpentine beetle. Trees attacked
severely are being utilized by commercial sale.
- NORTH Insignificant to moderate damage by black turpentine beetle
CAROLINA has occurred in Onslow, Cumberland, Lee and David Counties.
- Also some red turpentine beetle activity was observed in
Jackson County. (North Carolina Department of Natural
and Economic Resources)
- SOUTH The black turpentine beetle outbreak which began in the
CAROLINA summer of 1970 on the Sand Hills State Forest and Cheraw
State Park has apparently subsided. Aerial and ground
surveys in June, 1971 revealed only scattered spots con-
taining 1-5 trees, most of which were inactive. Intensive
salvage operations conducted from August, 1970 through
May, 1971 by Commission personnel, coupled with high
parasite and predator activity during the winter months,
are cited as the primary factors in bringing the outbreak
under control. A total of 7600 cords of pulpwood and
235 MBF (Scribner scale) of sawtimber were salvaged during
the outbreak. (South Carolina State Commission of Forestry)
- TEXAS Black turpentine beetle has remained a problem in east
Texas. A buildup has been reported in forest situations
along with residential areas where construction operations
have produced wounds on pine trees. (Forest Pest Activity
Report, Texas Forest Service)
- VIRGINIA Damage due to black turpentine beetle has been noted on
the coastal plain and in the Piedmont of Virginia. Spots
of up to 10 trees have been observed. (Virginia Division
of Forestry)
- IPS ENGRAVER BEETLES, *Ips* spp.
- ARKANSAS Infestations were reported on an increase in the Sheridan,
Oden, Camden, Wickes, Pine Bluff, Fordyce, and Arkadelphia
areas. The populations are following the usual seasonal
pattern and pose no serious threat unless dry conditions
prevail into a mild, prolonged fall season. (Arkansas
Forest Pest Report)

IPS ENGRAVER BEETLE (CONT'D)

- FLORIDA Considerable *Ips* beetle activity has occurred but has been restricted mostly to plantations on drier slopes, where the stress of drought and crowded stands produced favorable buildup conditions. (1971 State Aerial Survey of Forest Pest Activity in Florida)
- MISSISSIPPI There has been a marked decrease in *Ips* activity in the areas affected by Hurricane Camille. (Mississippi Forestry Commission)
- TEXAS *Ips* damage has been reported in sixteen counties in south-east Texas. Some areas have reported as many as 100-200 trees being damaged. (Forest Pest Activity Report, Texas Forest Service)

PINE SAWFLIES, *Neodiprion* sp.

- KENTUCKY The Virginia pine sawfly, *N. pratti pratti*, again caused light to heavy defoliation throughout the state; the Arkansas sawfly, *N. taedae linearis*, and the Redheaded pine sawfly, *N. lecontei*, also caused defoliation of pines over the state. The Arkansas sawfly was primarily concentrated in the western corner of Kentucky, while the activity of the Redheaded pine sawfly was reported statewide. (Kentucky Division of Forestry)
- MISSISSIPPI The Redheaded pine sawfly *N. lecontei* (Fitch) has been observed damaging pines in several counties in central Mississippi. (Mississippi Forestry Commission)
- NORTH
CAROLINA A sudden outbreak of white pine sawfly *N. pinetum*, completely defoliated six and partially defoliated another 145 white pine seed trees on the Beech Creek Seed Orchard at Murphy, North Carolina.
- SOUTH
CAROLINA Minor defoliation caused by *N. excitans* occurred on the Francis Marion Seed Orchard.
- TENNESSEE The Arkansas sawfly, *N. taedae linearis*, presently enjoys the widest distribution of any species in the State occurring in most west and southern middle Tennessee counties and in a small five-county area east of the Plateau from Athens south to the Georgia line. Areas of heaviest defoliation by this insect in 1971 were in Carroll and surrounding counties in western Tennessee. Additional activity occurred in Hamilton, Bradley, and Polk Counties in the east.

PINE SAWFLIES (CONT'D)

- TENNESSEE
(CONT'D) Heavy defoliation by the Virginia pine sawfly, *N. pratti pratti*, was spotty and occasional across the whole State.
- Another species believed to be Hetrick's sawfly, *N. hetrickii*, was discovered defoliating loblolly pines in a small area in Polk and Bradley Counties near the Georgia line. Damage caused by this "new" species is relatively minor. (Tennessee Division of Forestry)
- TEXAS Pine sawfly damage has been observed in Wood, Rusk, Panola, and Colorado Counties. (Forest Pest Activity Report, Texas Forest Service)
- VIRGINIA Redheaded pine sawfly *N. lecontei*, was active in six counties of the Piedmont area; in Hanover County on the coastal plain, and also caused severe damage to two loblolly plantations in Shenandoah County, with one additional moderately damaged plantation in Shenandoah County. (Virginia Division of Forestry)
- Defoliation by the Virginia pine sawfly, *N. pratti pratti*, was reported as generally light on the coastal plains but was causing up to 50 percent defoliation in scattered stands throughout the Richmond District. (Virginia Division of Forestry)
- NANTUCKET TIP MOTH, *Rhyacionia frustrana*
- ARKANSAS Arkansas reports over 50 percent of several plantations infested with pine tip moths. Damage is increasingly evident in the Little Rock urban area. Activity is declining, but where recent growth is available for food, activity will continue until frost. (Arkansas Pest Report)
- ARKANSAS, LOUISIANA & MISSISSIPPI Light infestations of tip moth continue on the Ouachita Seed Orchard in Arkansas. Some increase in activity by this insect is reported on the Erambert Seed Orchard in Mississippi. Severe infestations occurred this year on shortleaf pine at the Stuart Seed Orchard in Louisiana.
- NORTH CAROLINA A significant increase in tip moth activity occurred in the Virginia and shortleaf pine sources on the Beech Creek Federal Seed Orchard. It is hypothesized that orchard grasses at the tree bases completed for the phorate systemic insecticide which was applied last spring and prevented full protection in certain areas within the seed orchard.

NANTUCKET TIP MOTH (CONT'D)

SOUTH CAROLINA

Tip moth, *R. frustrana*, was noted in shortleaf and loblolly seed trees on the Francis Marion Federal Seed Orchard. Another species of tip moth, *R. subtropica* Miller, were observed in the longleaf seed trees. It is highly probable that part of the attacks in the loblolly were made by this species. Damage is expected to increase unless control measures are initiated.

VIRGINIA

Severe pine tip moth damage was reported in several plantations in Accomac County. (Virginia Division of Forestry)

BALSAM WOOLLY APHID, *Adelges picea*

NORTH CAROLINA

The balsam woolly aphid continues to spread and to cause mortality in Fraser fir stands. A heavy infestation has been detected in the seed production area on Roan Mountain of the Toecane Ranger District, Pisgah National Forest. Control action is under consideration.

Balsam woolly aphid traps on Mount Mitchell State Park have revealed a large increase in range and intensity of attack. Twenty-eight traps out of a total of seventy-five placed revealed the presence of immature aphid crawlers. (North Carolina Department of Natural and Economic Resources)

SEED ORCHARD INSECTS

ARKANSAS & MISSISSIPPI

A midge, *Contarinia* sp. of the family Cecidomyiidae is causing light to heavy damage to needles of loblolly pine at the Erambert Seed Orchard, Mississippi. The insect apparently feeds on young tissues beneath the sheath of young needles. Damage becomes more pronounced as the needles grow older. The feeding of the insect causes crescent shaped lesions on the side of the needle. The needle eventually bends at the lesion points and dies (Figure 1). Needles on severely infested pine drop off (Figure 2).

LOUISIANA & MISSISSIPPI

A mealy bug, *Oracella acuta* (Lobdell) family Pseudococcidae was found lightly infesting an occasional loblolly pine tree on the Stuart and Erambert Seed Orchards in Louisiana and Mississippi. A small predaceous beetle *Scymnus* (*Diomus*) *myrmedon* Casey (Soccinellidae) was found preying on this insect.

SEED ORCHARD INSECTS (CONT'D)

LOUISIANA The pine tortoise scale of the family Coccidae *Toumeyella numismaticum* (P&M) was found lightly infesting an occasional loblolly pine tree on the Stuart Seed Orchard, Louisiana.

SEED AND CONE INSECTS (GENERAL)

NORTH Seed bugs, *Leptoglossus corculus* (Figure 3) and *Tetyra*
CAROLINA *bipunctata*, were collected from white pine on the Beech
Creek Seed Orchard. Dissection of random cones indicated
that slightly more than two percent of the seed appeared
to have been damaged.

HARDWOOD DEFOLIATORS

GYPSY MOTH, *Porthetria dispar* (L.)

VIRGINIA Confirmed male gypsy moth catches from the 7000 traps put
out by ARS, the Virginia Department of Agriculture and
Commerce, and the Virginia Division of Forestry were as
follows by county: Accomac (15); Northhampton (21);
Hampton (3); Fairfax (2); Chesapeake (1); Orange (4);
Roanoke (1); Virginia Beach (2); James City (2); Fred-
erick (1); Wise (1); Rockingham (1); Mecklenburg (1);
Campbell (1); Fauquier (1); Prince William (1); Smyth (2).
Many of the catches came from camping areas indicating wide
dispersion due to accidental transport. (Virginia Division
of Forestry)

NORTH Gypsy moths have been trapped or found in six scattered
CAROLINA locations in North Carolina. This is the first year that
gypsy moths have been found in the State. Male moths were
trapped in McDowell, Robeson, Northhampton, Vance, and
Dare counties. In addition, gypsy moth egg masses and
larvae were found on a trailer near Grifton, North Carolina,
in Pitt County. (North Carolina Department of Natural
and Economic Resources)

SOUTH A confirmed trapping of a gypsy moth male occurred at
CAROLINA Myrtle Beach.

FALL WEBWORM, *Hyphantria cunea*

- MISSISSIPPI Moderate to heavy infestations of fall webworm have been observed from Jackson, Mississippi, and southward to the coast. (Mississippi Forestry Commission)
- NORTH CAROLINA Heavy localized activity is scattered throughout eastern North Carolina on hardwoods. (North Carolina Department of Natural and Economic Resources)
- SOUTH CAROLINA An unusually high population of fall webworm is present in the coastal plain of the State. Heaviest attacks have been noted on persimmon and pecan with numerous trees being completely defoliated.
- VIRGINIA Marked increase in number of nests is evident this year in the coastal plain area, but damage is generally light. Also, some activity is scattered throughout the Piedmont and mountain regions. (Forest Pest Survey Report, Virginia Division of Forestry)

WALKINGSTICK, *Diapheromera femorata* (Say)

- ARKANSAS & OKLAHOMA The walkingstick is reaching epidemic proportions on the Ouachita National Forest for the third consecutive year. The infestation was more intensive this year than the two previous years, defoliating 135,000 acres of hardwood species. Windingstair Mountain was the heaviest defoliated area.
- NORTH CAROLINA General defoliation has occurred to black locust on sections of the Blue Ridge Parkway southwest of Asheville and parts of the Great Smoky Mountains National Park. The damage has been compounded by a defoliator complex including walkingstick, *D. femorata*, a looper, a tussock moth, *Halisidota* spp. and the saddleback, *Sibine stimulea* (Clemens). No tree mortality is apparent and defoliate range from light to moderate.
- KENTUCKY, NORTH CAROLINA, TENNESSEE & VIRGINIA Locust leaf miner damage is reported to be about the same as in past years in the Southeast. Scattered sporadic outbreaks have occurred but levels have generally been normal overall.

WALNUT CATERPILLAR, *Datana integerrima* Grote & Robinson

- ARKANSAS Infestations of walnut caterpillar on pecan and walnut trees have been observed in the vicinity of Booneville, Arkansas.

WALNUT CATERPILLAR (CONT'D)

MISSISSIPPI The walnut caterpillar is infesting pecan trees in south central Mississippi.

YELLOW-NECKED CATERPILLAR *Datana ministra* (Drury)

MISSISSIPPI The yellow-necked caterpillar is infesting trees of the oak family throughout the State. (Mississippi Forestry Commission)

LACEBUGS, *Corythuca* spp.

OKLAHOMA A lacebug *Corythuca* spp. was found heavily infesting Chinguapin oaks and American elm trees on the Platt National Park, Oklahoma.

MIMOSA WEBWORM, *Homadaula aniscocentra* Clarke

OKLAHOMA The mimosa webworm *H. aniscocentra* was found in scattered to heavy infestations on mimosa in Oklahoma in Pauls Valley, Garvin County, Purcell, McClain County, Norman, and Cleveland County. Light infestations were noted in Guthrie Logan County. (Oklahoma Pest Report) Heavy infestations were also noted by the Alexandria Field Office of the Pest Management Group in and around Broken Bow, McCurtain County, Oklahoma.

ARKANSAS The mimosa webworm is reported as very active in Arkansas at present. (Arkansas Pest Report)

ELM LEAF BEETLE, *Pyrrhalta luteola* (Muller)

ARKANSAS Elm leaf beetles are reported as increasingly noticeable in the El Dorado area. Damage from this insect is also obvious across northern arkansas. Larvae as well as adult beetles are very numerous on most Chinese elm trees. (Arkansas Pest Report)

MISCELLANEOUS INSECTS

- FLORIDA The Cypress looper, *Anacamptodes cypressaria*, defoliated about 200 acres in Fisheating Creek in Glades County. (Florida Division of Forestry)
- THE EVERGREEN BAGWORM, *Thyridopteryx ephemeraeformis* (Haworth)
- ARKANSAS Bagworm activity has been heavy again this year. Worms have matured and feeding has stopped. Eggs can be found in the old bags containing female moths. (Arkansas Pest Report)
- KENTUCKY Bagworms, *Thyridopteryx ephemeraeformis*, were reported to be a problem on shade trees throughout the state; trees affected were primarily white pine, cedar, and black locust. (Kentucky Division of Forestry)
- MISSISSIPPI Activity has been observed in urban areas in cities around the State. (Mississippi Forestry Commission)
- VIRGINIA Bagworm population was widespread across the State, especially in the Piedmont counties of Orange and Culpepper.

STATUS OF FOREST DISEASES

NURSERY AND SEED ORCHARD DISEASES

- ALABAMA *Cylindrocladium* root rot of black walnut and yellow poplar continues to be a major problem in hardwood nurseries throughout the South. Extensive damage from this disease was observed on both hosts at Auburn University's nursery. Also, at this nursery, *Phomopsis* sp. was causing mortality in Arizona cypress.
- LOUISIANA *Pythium* sp. was isolated from diseased loblolly pine seedlings from a nursery in Hodge, Louisiana.
- NORTH CAROLINA Symptom expression and damage by the root rot fungus, *Cylindrocladium scoparium* have increased significantly during this past summer in the 1-0 black walnut seed beds at the Griffith State Nursery in Clayton, North Carolina. At present, approximately 50 percent of the current 40,000 walnut seedling crop are displaying disease symptoms (foliage discoloration and/or root rot). In July, approximately 10 percent of these seedlings were displaying disease symptoms. The affected seed beds were fumigated with 350 pounds methyl bromide per acre before planting in April, 1971.

NURSERY AND SEED ORCHARD DISEASES (CONT'D)

SOUTH
CAROLINA

Lophodermium needle cast has been observed in a 2-0 scotch pine-Spanish variety seedlings at the Piedmont State Nursery near Walhalla and Seneca, South Carolina. However, needle discoloration was just beginning to occur when examined in September, 1971. Discoloration was confined primarily to the lower needles in the seedling beds where moisture and temperature are more favorable for fungus development and spread. Some severe brown spot was observed on the Francis Marion Seed Orchard in the South Carolina longleaf seed source.

TENNESSEE

Fomes annosus has recently been found causing considerable damage in a loblolly pine seed orchard owned by Hiwassee Land Company in eastern Tennessee. The 12-year-old trees were recently moved from the Rose Island seed orchard due to a proposed new TVA dam on the Little Tennessee River which will flood the old site. A 100 percent survey of some 1500 trees moved to date revealed 23 *F. annosus* infected trees. Several of these trees are already dead or dying.

Lophodermium needle cast was recently found associated with severe needle discoloration and defoliation in the 3-0 and 2-0 white pine nursery stock at the Pinson State Nursery near Lexington, Tennessee. The present damage is very widespread and severe in the white pine nursery beds. Similar damage was noted on the 2-0 white pine seedlings in 1970 and was severe enough to render them unsaleable last year, whereby the 2-0 seedlings were held over until this year. Spray treatments conducted throughout the summer with fermate have been ineffective.

TENNESSEE &
SOUTH
CAROLINA

Juniper needle blight, caused by *Phomopsis juniperovora* has been associated with foliage blight in 1-0 eastern red cedar beds at the TVA Experimental nursery near Norris, Tennessee, and the Piedmont State Nursery in South Carolina. Disease symptoms, consisting of discolored and dead seedlings, were severe and widespread in the TVA cedar seedling beds.

TEXAS

Severe chlorosis of loblolly and shortleaf pine was present at Indian Mound Nursery in Texas. Improper fertilization is believed to be the major cause of the trouble.

COMANDRA BLISTER RUST, CAUSED BY *Cronartium comandrae*

TENNESSEE About 15 dead trees found in an acre-size area of a 16-year old Hiwassee Land Company loblolly pine plantation in Rhea County displayed typical comandra rust stem cankers. These are only a couple of miles from a plantation in which several comandra-infected trees were discovered a year ago, the first known instance of comandra east of the Plateau. No new or current infection was found in either plantation. In these two stands the disease has apparently run its course due to the alternate host plant, false toadflax, having long since been shaded out by the rapidly-growing pines.

A spot-check of several young loblolly pine plantations in Morgan County revealed the presence of comandra rust in at least two areas. Even though the level of infection is presently very slight, the infected stands are 20 miles north of the closest previously known infection, and toadflax was found in both areas in abundance. (Tennessee Division of Forestry)

DUTCH ELM DISEASE CAUSED BY *Ceratocystis ulmi* (Buism.) C. Moreau

SOUTH CAROLINA Since the first discovery of this disease in South Carolina in 1970, in Oconee County, pathologists at Clemson University have made three additional confirmations. The three new discoveries represent two new record counties for the disease in South Carolina. The new counties are Lancaster and York and are located in the north central portion of the State approximately 110 miles from the original spot. Winged elm was the affected species in all of the spots.

TENNESSEE Dutch elm disease is causing widespread damage this year, especially in the mid-State area where elms are numerous in fence rows and woodlots.

OAK WILT CAUSED BY *Ceratocystis fagacearum* (Bretz) Hunt

SOUTH CAROLINA During June and July a survey was made for oak wilt in parts of nine counties (two million acres) where the disease had not previously been found. Only one spot was discovered, the first one for Richland County. Four counties are now known to have the disease present. (South Carolina State Commission of Forestry)

FUSIFORM RUST CAUSED BY *Cronartium fusiforme* (A&K) Hedge and Hunt

SOUTH- EAST AREA

The Asheville, North Carolina Forest Pest Management Group will begin shortly to evaluate a pathological inoculation method with fusiform rust spores of selected loblolly and slash pine to determine their resistance to the disease. This inoculation procedure was developed by pathologists at the Southeastern Forest Experiment Station and offered the most promise for implementation on a larger scale. There is a great deal of interest and support by University, Industrial, Federal, and State forest tree improvement groups in this study. A seven member Ad hoc Advisory Committee is being selected to provide personal expertise, to evaluate the results of the study, and to make recommendations on how best a central fusiform rust testing facility should be designed and administered.

Statewide fusiform rust surveys have been completed in Florida, Louisiana, and South Carolina. Field work is still in progress in Georgia, Arkansas, and Mississippi.

SYCAMORE ANTHRACNOSE, *Gnomonia veneta*

TENNESSEE

Sycamore anthracnose infection has been heavy this year in upper east Tennessee and in west Tennessee. Defoliation of sycamore was total in many areas. Lower than average temperatures favoring infection in early spring undoubtedly account for the severe infection this year. (Tennessee Division of Forestry)

DIEBACK AND WIND BREAKAGE OF SYCAMORE

LOUISIANA

A canker disease, responsible for dieback and wind breakage of mature sycamore, was observed in hardwood stands located along the Atchafalaya River Bottom in St. Martin Parish. The fungus causing the cankers has been tentatively identified as *Hypoxyton tinctor* (Berk.) Cke. (Louisiana Forestry Commission)

ENVIRONMENTAL POLLUTION

ANHYDROUS AMMONIA DAMAGE

ARKANSAS

Rupture of a high pressure anhydrous ammonia transmission line in Independence County, Arkansas, June 5, 1971, resulted in damage to 9600 acres of forested land. Heavy

ANHYDROUS AMMONIA DAMAGE (CONT'D)

ARKANSAS
(CONT'D)

mortality of pine, cedar, and hardwoods occurred over 11 acres adjacent to the rupture. Trees exhibiting moderate to light damage over the remaining acreage are expected to recover.

NEEDLE TIP BURN OF EASTERN WHITE PINE

SOUTHERN
APPALACHIANS

Needle tip burn on eastern white pine, a disease which has been appearing periodically in the Southern Appalachians for years, was severe in several localized areas of the mountains this past summer. The problem is generally associated with air pollution, or in some cases needle cast fungi. In both instances, affected trees are not normally permanently damaged.

Ozone (O_3) is the air pollutant most commonly associated with this disorder, although sulfur dioxide (SO_2) has also been implicated. High concentrations of ozone are produced during summer thunderstorms, while sulfur dioxide results from combustion of fossil fuels.

Any portion of tree crown may be affected. Some of the trees affected this summer suffered tip burn over their entire crown to the point that the trees appeared to be dying or dead from a distance.

FIGURE 1. Midge damage (*Contarinia* sp.) on loblolly pine
in the Erambert Seed Orchard



FIGURE 2. Walkingstick defoliation of red oak on Winding-stair Mountain, Arkansas.



FIGURE 3. Seed bugs, *Leptoglossus corculus*, on white pine cones in the Beech Creek Seed Orchard, Murphy, N.C.



More detailed information can be obtained by writing to the Forest Pest Management Group Field Offices listed below or the Atlanta Office:

FIELD OFFICES

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